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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TOM VANDERMEIJDEN

Appeal 2017-004199
Application 13/101,915
Technology Center 2800

Before TERRY J. OWENS, WESLEY B. DERRICK, and MERRELL C. CASHION, JR., *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–8, 11–14, and 16–23. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The Appellant's claimed invention "generally relates to electronic devices" (Spec. ¶ 1). Claim 1 is illustrative:

> 1. A processing system for use with a capacitive input device of the type having a plurality of capacitive sensor electrodes and configured to sense in a sensing region, the processing system comprising:
>
> sensor electrode circuitry configured to operate the plurality of capacitive sensor electrodes to produce pluralities of

preliminary values, each preliminary value corresponding to an individual measured capacitance associated with a corresponding capacitive pixel and obtained using a sensor electrode of the plurality of sensor electrodes; and

a determination module configured to determine information about input in the sensing region based on comparisons of the pluralities of preliminary values with corresponding baseline values of a plurality of baseline values, wherein the determination module is configured to selectively operate in a first mode and a second mode such that:

while operating in the first mode, the determination module individually compares a baseline value of the plurality of baseline values with a corresponding preliminary value of the plurality of preliminary values, and selectively changes the baseline value by a first amount when the baseline value is different from the corresponding preliminary value, wherein, in the first mode, the selectively changing the baseline value is performed even when the processing system determines that an input object is in the sensing region; and

while operating in the second mode, the determination module does not selectively change the baseline value by the first amount when the baseline value and the corresponding preliminary value are different and when the processing system determines that an input object is in the sensing region,

wherein the determination module is configured to switch from operating in the first mode to operating in the second mode in response to one of an external signal and a determination that no input objects are in the sensing region.

The Reference

Westerman	US 2008/0158182 A1	July 3, 2008

The Rejections

Claims 1–8, 11–14, and 16–23 stand rejected under 35 U.S.C. § 101 as failing to claim patent-eligible subject matter, and under 35 U.S.C. § 102(b) over Westerman.

OPINION

We affirm the rejection under 35 U.S.C. § 101 and reverse the rejection under 35 U.S.C. § 102(b).

Rejection under 35 U.S.C. § 101

The Appellant argues the claims as a group (App. Br. 8–12). We therefore limit our discussion to one claim, i.e., claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2012).

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court stated in *Bilski v. Kappos*, 561 U.S. 593, 601 (2010) that "[t]he Court's precedents provide three specific exceptions to § 101's broad patent-eligibility principles: 'laws of nature, physical phenomena, and abstract ideas.' [*Diamond v.*] *Chakrabarty*, [447 U.S. 303,] 309, 100 S. Ct. 2204 [(1980)]." The Court further stated that limiting an abstract idea to a particular technological environment does not make the concept patentable. *See Bilski*, 561 U.S. at 610–611. Determining whether a claimed invention is patent-eligible subject matter requires determining whether the claim is directed toward a patent-ineligible concept and, if so, determining whether the claim's elements, considered both individually and as an ordered combination, transform the nature of the claim into a patent-eligible application. *See Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014).[1]

[1] The Appellant states that "[i]t is uncontroversial that all claims satisfy Step 1 of the analysis set forth in *Alice Corp*" (App. Br. 8). In view of the

The Appellant's claim 1 is directed toward a patent-ineligible concept, i.e., the abstract idea of comparing a preliminary value with a baseline value, in a first mode selectively changing the baseline value when the baseline value and the corresponding preliminary value differ, even when an input object has been determined to be in a sensing region, and in a second mode not selectively changing the baseline value when the baseline value and the corresponding preliminary value differ and an input object has been determined to be in the sensing region. The claimed processing system is limited to being for use with a capacitive input device having sensor electrodes which sense in a sensing region, but "the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment." *Alice*, 134 S. Ct. at 2358 (quoting *Bilski*, 561 U.S. at 610) (internal quotation marks omitted); *See also Parker v. Flook*, 437 U.S. 584, 596 (1978) ("'[I]f a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.'") (quoting *In re Richman*, 563 F.2d 1026, 1030 (C.C.P.A. 1977)). The claim requires input of capacitive sensor electrode data including preliminary values and either an external signal or a determination that no input objects are in the sensing region, but "mere '[data-gathering] step[s] cannot make an otherwise nonstatutory claim statutory.'" *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370

Appellant's misstatement of the two-step *Alice* test as "[i]n the first step, a determination is made whether the claims are directed to a statutory class. In the second step and first part (Step 2A), a determination is made whether the claimed subject matter is directed towards an abstract idea" (*id.*), the meaning of that statement is unclear.

(Fed. Cir. 2011) (quoting *In re Grams*, 888 F.2d 835, 840 (Fed. Cir. 1989)). Thus, claim 1's elements, both individually and as an ordered combination, do not transform the nature of the claim into a patent-eligible application.

The Appellant asserts that "the claimed invention allows for better detection of input objects by an input device" (App. Br. 10), "the claims of the present application entails [sic] an unconventional technical solution to a technical problem (*i.e.*, baseline management in order to properly detect input objects)" (Reply Br. 6), "the additional steps of the claimed invention tie the mathematical operation to the device's ability to detect input objects according to a correct baseline" (App. Br. 11), and "claim 1 recites **specific means** for when and how to update a baseline that is used to detect input" (Reply Br. 7).

The Appellant's claim 1 does not require proper or better detection of input objects. Nor does it require detecting objects according to a corrected baseline. The claim merely requires the abstract idea of a determination module (the argued specific means) which, based upon data gathered from sensor electrode circuitry, changes a baseline value in a first mode, does not change the baseline value in a second mode, and switches from the first mode to the second mode. The claim lacks a limitation that transforms its nature into a patent-eligible application.

Thus, we are not persuaded of reversible error in the rejection under 35 U.S.C. § 101.

Rejection under 35 U.S.C. § 102(b)

"Anticipation requires that every limitation of the claim in issue be disclosed, either expressly or under principles of inherency, in a single prior

art reference." *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1255–56 (Fed. Cir. 1989).

We need address only the independent claims, i.e., claims 1, 11 and 16. Claim 1 requires that "the determination module individually compares a baseline value of the plurality of baseline values with a corresponding preliminary value of the plurality of preliminary values." Claim 11 requires that "the processing system individually compares a baseline value of the plurality of baseline values with a corresponding preliminary value of the plurality of preliminary values." Claim 16 requires "individually comparing a baseline value of the plurality of baseline values with a corresponding preliminary value of the plurality of preliminary values."

The Examiner finds that Westerman, in paragraphs 69 and 75, "individually compares a baseline value of the plurality of baseline values with a corresponding preliminary value of the plurality of preliminary values" (Final Act. 4–5).

Westerman discloses in paragraph 69 a global baseline inversion detection algorithm wherein one or more image scans of an entire sensor panel is/are performed, a normalized baseline is captured, the sensor output values above the normalized baseline value are summed, the sensor output values below the normalized baseline value are summed, and the baseline is recaptured only when the magnitude of the summed below normalized baseline values is much greater than the magnitude of the summed above normalized baseline values for several consecutive image scanning frames. In paragraph 75, Westerman performs a periodic baseline adjustment by scanning a sensor panel after a dynamic adjustment time interval,

normalizing the sensor output values by subtracting previously computed offset values from them, incrementing positive normalized sensor values and decrementing negative normalized sensor values, and waiting the duration of the adjustment period before again scanning the sensor panel.

The Examiner does not explain how those portions of Westerman disclose individually comparing a baseline value of a plurality of baseline values with a corresponding preliminary value of a plurality of preliminary values.

The Examiner finds that "[t]he aggregated number of sensor output values of Westerman (see Westerman Figure 2a) are individual preliminary values within the image in the same manner as shown in Figures 2A-2C of the instant application. The baseline value is changed based on the result of the comparison to ensure accurate determination of touch sensor output as the goal of both Westerman and the instant application" (Ans. 6–7).

The Examiner does not explain how comparison of the capacitive multi-touch panel in Westerman's Figure 2a and the capacitive sensor electrodes and resulting capacitive images in the Appellant's Figures 2A–C indicates that Westerman individually compares a baseline value of a plurality of baseline values with a corresponding preliminary value of a plurality of preliminary values.

The Examiner, therefore, has not established a prima facie case of anticipation of the Appellant's claimed invention.

DECISION/ORDER

The rejection of claims 1–8, 11–14, and 16–23 under 35 U.S.C. § 101 as failing to claim patent-eligible subject matter is affirmed. The rejection of

claims 1–8, 11–14, and 16–23 under 35 U.S.C. § 102(b) over Westerman is reversed.

It is ordered that the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED